**Uses of metals**

**1.** Aluminium is widely used to make soft drink cans.

(i) Evaluate the use of aluminium for this purpose. Refer to BOTH physical and

chemical properties of aluminium, and explain why they make aluminium suitable

for making soft drink cans.

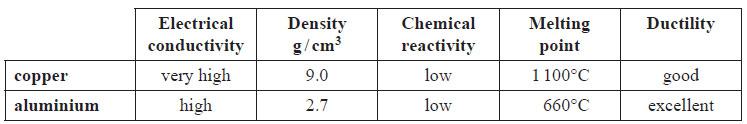
(ii) Name ONE metal that would be unsuitable as a material for making soft drink

cans. Justify your choice by referring to either a physical or a chemical property

of the named metal.

You may refer to the activity series in the Resource Booklet.

**2.**



Although copper is widely used throughout households for electrical wiring, aluminium is the metal used for long-distance power lines.

Evaluate the advantages and disadvantages of using copper and aluminium in these roles. Refer to BOTH physical and chemical properties in your answer.

**3.** Aluminium is used for packaging food and drink. Two such uses are aluminium foil and soft drink cans.

Discuss the use of aluminium for packaging food and drink. In your answer, you should:

state THREE physical properties of aluminium that make it suitable for making foil and soft drink cans

explain why these physical properties make aluminium suitable for making foil and soft drink cans

fully explain why aluminium can be used in packaging food and drink even though it is chemically reactive.

**4.** Metals are good conductors of heat.

Discuss how metals conduct heat **and** how this property can be applied in real life situations.

Your answer should include:

• how metals conduct heat (a diagram may be useful)

• ONE example of how any of the metals copper, aluminium or iron are used in a way that depends on their thermal conductivity.

**5.** A craftsperson uses silver metal rather than iron metal to make body jewellery. Justify why the metal silver is more suitable for body jewellery than the metal iron.

Include in your answer:

• the relevant physical and chemical properties of silver metal

• the relevant physical and chemical properties of iron metal

• a justification as to why silver is preferable to iron for body jewellery.

**6.** One of the most common uses of aluminium is packaging, including soft drink cans and aluminium foil.

Discuss why aluminium is used to package food and drinks despite the fact that aluminium is a reactive metal, found quite high up on the activity series (shown in your Resource Booklet). Include in your answer:

• TWO or more properties that make aluminium suitable for making cans and foil

• why aluminium can be used in packaging food and drink when the metal is quite reactive.

**7.** Sodium is not a metal that is usually used to make everyday objects, whereas aluminium is. For example, aluminium is used to make many objects from aeroplanes to soft drink cans.

Discuss reasons for the difference in the uses of sodium and aluminium. Refer to the chemical **and** physical properties of **both** sodium and aluminium in your answer.

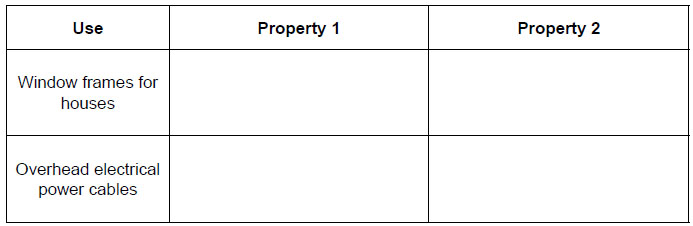
**8.** You have been asked to design a long-lasting metal roofing system for a house. The metals that are available are copper and iron.

Discuss the suitability of each metal for a roofing system. Refer to relevant physical **and** chemical properties of each metal in your answer.

**9.** Gold is a metal that is often used to make jewellery. Name two properties of gold that make it suitable for this use. Explain why the two properties you named in part (a) help make gold suitable for making jewellery.

**10.** State the **physical or chemical properties** of aluminium that make the metal suitable for each of the uses given in the table below.

Write a DIFFERENT PROPERTY in each cell of the table. Each property must relate to the given use.



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